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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/580,951

05/30/2006

Ulf Bodin

NET-6500

8919

25962 7590 09/01/2009  
SLATER & MATSIL, L.L.P.  
17950 PRESTON RD, SUITE 1000  
DALLAS, TX 75252-5793

EXAMINER

BROCKMAN, ANGEL T

ART UNIT

PAPER NUMBER

2416

MAIL DATE

DELIVERY MODE

09/01/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/580,951	<b>Applicant(s)</b> BODIN ET AL.	
	<b>Examiner</b> ANGEL BROCKMAN	<b>Art Unit</b> 2416	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05/04/2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 18-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Claims 1-16 and 18-20 were formerly rejected under 35 U.S.C. 102 (e). Pursuant to applicant's amendment these rejections are withdrawn.
2. Claims 17-18 were rejected under 35 U.S.C. 101. Pursuant to applicant's amendments, these rejections are withdrawn.

### ***Claim Rejections - 35 USC § 103***

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
  1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dziong et al.(US 6,791,941 B1, hereinafter Dziong) in view of Bearden et al.(US 2003/0086425 A1).

Regarding **claim 1**, Dziong discloses measuring parameters located outside the network core(see figure 1, ATM switch measuring delay (column 8, lines 1-2, column column 3 , lines 34-36) at the core (where the core is comprised of ATM 101-3 and associated links to other ATM switches) and detecting forward quality violations between the measurement nodes (column 8, lines 50-67, column 9, lines 1-45, figure 9) selecting at least one potentially overloaded interface comprised in the at least one path where quality violations were detected by combining knowledge about different end-to-end measurements in the network (column 7, lines 50-66, where the CAC model makes measurements, column 9), with knowledge about the topology, i.e.. which interfaces are traversed over each individual path, and knowledge about booking levels and forwarding capacity for the interfaces along the at least one path(column 10, lines 5-19); defining a new or adjusting an already existing provisional level for each selected interface, the provisioning level defining a maximum admitted sum of forwarding resources requested directly or indirectly by applications for their application data flows, for the interfaces, such that the usage of each path detected to have forwarding quality violations is limited to at one or more interfaces (column 4, lines 14-24, column 7, lines 25-40, figure 9).

Dziong does not explicitly disclose end-to-end delay. Bearden discloses end-to-end delay

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(¶[0057], where the QOS measurements include end-to-end delay ¶[0039],¶[0084]).

Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize the end-to-end delay as disclosed by Bearden along with the system as disclosed by Dziong. The end-to-end delay measurements can be taken using the system as disclosed by Dziong through software implementation. The motivation for utilizing the end end-to-end delay as disclosed by Bearden along with the system as disclosed by Dziong is to increase the efficiency of the system.

Regarding **claim 2**, Dziong discloses iterating the process to improve the provision settings of the data network (figure 9, block 970, which repeats the process)

Regarding **claim 3**, Dziong discloses storing information about previous end-to-end measurements and previous booking levels for the interfaces(column 10, lines 10-15, figure 9, block 900 where the previous end-to-end measurements and booking levels of the interfaces are included in the history).

Regarding **claim 4**, Dziong discloses using history of previous booking levels possibly together with any associated quality violations, forwarding capacities and/or provisioning levels for the interfaces for the selection of at least one potentially overloaded interface (column 10, lines 20-60).

Regarding **claim 5**, Dziong discloses detecting that a previously set provisioning level for an interface is reached without any measured quality violation on paths involving this interface (figure 9) and by using the stored information of previous

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booking levels selecting at least one other interface that probably caused the quality violation measured when the previously set provisioning level was set ,removing or increasing the provisioning level for the previously selected interface and instead provide a provisioning level to each new selected interface or if no other potentially overloaded exist, increasing the provisioning level(column 10, lines 30-60).

Regarding **claim 6**, Dziong discloses setting the provisioning level equal to the booking-level for the interface at the time for the detected quality violation(figure 9, column 10, lines 5-50, where the overbooking factor is the provisioning level). The provisioning level up and down are adjusted to keep the system equal to the booking level so that overbooking does not occur using the optimal values that are estimated from long term statistics of the system(column 7, lines 38-41).

Regarding **claim 7**, Dziong discloses the defining of a new or the adjusting of an already existing provisioning level for the at least one selected interface is performed by setting the provisioning level lower than the booking-level for the interface at the time for the detected quality violation (column 7, lines 21-41, where the violation degree is VQos which its the provisioning level) and either pre-empting some reservations to reach the provisioning level or waiting for some reservations to be released to reach the provisioning level (column 8, lines 20-3, figure 8, column 7, lines 55-67, where the CAC model provides distributing which includes a queue for waiting for bandwidth to be released).

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Regarding **claim 8**, Dziong discloses choosing one of the described provisioning level setting methods depending on which level of quality violation that was measured(column 8, lines 20-40, column 9,lines 37-65).

Regarding **claim 9**, Dziong discloses measuring parameters located outside the network core (figure 1, wherein the ATM switch 101-3 and its associated links to other ATM switches are the core and the measurements include end-to-end delay(column 8, lines 1-2 ) and detecting forward quality violations in at least one path between these nodes (column 8, lines 50-67, column 9, lines 1-45, figure 9) selecting at least one potentially overloaded interface comprised in the at least one path where quality violations were detected by combining knowledge about different measurements in the network (column 7, lines 50-66, where the CAC model makes measurements, column 9), with knowledge about the topology, i.e.. which interfaces are traversed over each individual path, and knowledge about booking levels and forwarding capacity for the interfaces(column 10, lines 5-19); defining a new or adjusting an already existing provisional level for each selected interface, the provisioning level defining a maximum admitted sum of forwarding resources requested directly or indirectly by applications for their application data flows, ADFs, for the interface/s, such that the usage of each path detected to have forwarding quality violations is limited to at one or more interfaces (column 4, lines 14-24, column 7, lines 25-40, figure 9). Dziong does not explicitly disclose end-to-end delay. Bearden discloses end-to-end delay (§[0057]). Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize the end-to-end delay as disclosed by Bearden along with the system as disclosed by Dziong. The end-to-end delay measurements can be taken using the system as disclosed by

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Dziong through software implementation. The motivation for utilizing the end end-to-end delay as disclosed by Bearden along with the system as disclosed by Dziong is to increase the efficiency of the system.

Regarding **claim 10**,. Dziong discloses iterating the process to improve the settings of the provisioning levels in the system (figure 9, block 970, which repeats the process)

Regarding **claim 11**,. Dziong discloses storing information about previous end-to-end measurements and previous booking levels for the interfaces (column 10, lines 10-15, figure 9, block 900 where the previous measurements and booking levels of the interfaces are included in the history). Dziong does not explicitly disclose end-to-end delay. Bearden discloses end-to-end delay (§[0057]). Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize the end-to-end delay as disclosed by Bearden along with the system as disclosed by Dziong. The end-to-end delay measurements can be taken using the system as disclosed by Dziong through software implementation. The motivation for utilizing the end end-to-end delay as disclosed by Bearden along with the system as disclosed by Dziong is to increase the efficiency of the system.

Regarding **claim 12**, Dziong discloses using history of previous booking levels possibly together with any associated quality violations, forwarding capacities and/or provisioning levels for the interfaces for the selection of at least one potentially overloaded interface (column 10, lines 20-60).



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Regarding **claim 13**,. Dziong discloses detecting that a previously set provisioning level for an interface is reached without any measured quality violation on paths involving this interface (figure 9) and by using the stored information of previous booking levels selecting at least one other interface that probably caused the quality violation measured when the previously set provisioning level was set and remove or increase the provisioning level for the previously selected interface and instead provide a provisioning level to each new selected interface or if no other potentially overloaded exist, increasing the provisioning level(column 10, lines 30-60).

Regarding **claim 14**, Dziong discloses setting the provisioning level equal to the booking-level for the interface at the time for the detected quality violation (figure 9, column 10, lines 5-50, where the overbooking factor is the provisioning level). The provisioning level up and down are adjusted to keep the system equal to the booking level so that overbooking does not occur using the optimal values that are estimated from long term statistics of the system(column 7, lines 38-41).

Regarding **claim 15** Dziong discloses the defining of a new or the adjusting of an already existing provisioning level for the at least one selected interface is performed by setting the provisioning level lower than the booking-level for the interface at the time for the detected quality violation (column 7, lines 21-41, where the violation degree is VQos which its the provisioning level) and either pre-empting some reservations to reach the provisioning level or waiting for some reservations to be released to reach the provisioning level (column 8, lines 20-3, figure 8, column 7, lines 55-67, where the CAC

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model provides distributing which includes a queue for waiting for bandwidth to be released).

Regarding **claim 16**, Dziong discloses adjusting means to choose one of the described provisioning setting level methods depending on which level of quality violation was measured (column 8, lines 35-50, figure 9).

Regarding **claims 17-18**, Dziong discloses computer software in a processing means for performing steps ( column 3, lines 47-64).

### ***Response to Arguments***

7. Applicant's arguments filed May 30,2009 have been fully considered and are persuasive. Regarding claims 1-16 and 18-20, Applicant argues Dziong does not disclose end-to-end measurements or measurement nodes located outside the network core. Examiner agrees with the applicant.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANGEL BROCKMAN whose telephone number is (571)270-5664. The examiner can normally be reached on Monday-Friday ,7:30-5:00pm.

9. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derrick Ferris can be reached on 571-272-3123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ANGEL BROCKMAN  
Examiner  
Art Unit 2416

/A. B./  
Examiner, Art Unit 2416

/Derrick W Ferris/  
Supervisory Patent Examiner, Art Unit 2416